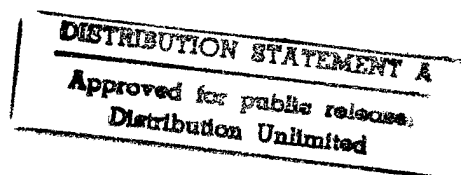




# ***JPRS Report***

# **Epidemiology**



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# Epidemiology

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25 October 1991

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## ANGOLA

### Measles Kills 20 Children in Uige During Three Week Period

*MB1609205891 Luanda Radio Nacional Network in Portuguese 1900 GMT 16 Sep 91*

[Text] A total of 20 children between the ages of one and three years died of measles in Uige city between 15 August and 8 September. To curb the epidemic, which has already killed over 100 children, local health authorities vaccinated over 700 children in the outskirts of Uige city over the weekend.

It will be recalled that in May, the epidemic killed hundreds of children who were undernourished and faced a shortage of drinking water.

He said the house-to-house immunisation programme was successful but it had to be suspended because of the heavy rains and promised that it would be resumed when the rains subsided.

Dr. Sagoe announced that UNICEF had stopped financing the Expanded Programme on Immunisation (EPI) as well as its support for the provision of vehicles except the continuous supply of drugs.

He urged the District Health Management Team to improve upon the Primary Health Care Programme (PHC) to enable them to provide some meaningful services to the communities.

He said their work would reduce preventable diseases like malaria, diarrhoea, yellow fever and other communicable diseases.

## CHAD

### Cholera Epidemic Hits Mayo Kebbi Prefecture

*AB2309095091 Ndjamenia RNT Radio in French 1900 GMT 22 Sep 91*

[Excerpt] The cholera epidemic which has bereaved so many families has not yet been eradicated. After Chari-Baguirmi, Lac, Kanem, and several other regions, cholera seems to have chosen Mayo Kebbi Prefecture as its abode. Not a day passes by in this prefecture without the recording of dozens of cases, including a number of deaths. The situation is so disturbing that the minister of public health and social affairs has gone there for the second time within one month, while a medical team has been sent as reinforcement to the region. [passage omitted]

## GHANA

### Communicable Diseases Increase in Kwahu South

*91WE0535A Accra PEOPLE'S DAILY GRAPHIC in English 8 Aug 91 p 16*

[Article: "Communicable Diseases on the Increase in Kwahu South"]

[Text] Yaws and other communicable diseases are on the increase in the Kwahu South District, Dr. Ken D. Sagoe, District Medical Officer, has announced.

He said the district recorded 1,967 cases of yaws from January to June, this year, 600 cholera cases, 573 diarrhoea and 20 chicken pox cases.

Dr. Sagoe, who was addressing the Kwahu South District Health Management Team at Atibie, said the high rate of communicable diseases in the area is due to poor environmental hygiene in the rural communities.

He called on opinion leaders such as chiefs, pastors and members of revolutionary organs to help educate the patients on the need to receive treatment.

## KENYA

### Meningitis Kills 12 in Dodoma

*91WE0538A Nairobi DAILY NATION in English 14 Aug 91 p 1*

[Article: "Meningitis Kills Twelve in Dodoma"]

[Text] Twelve people died of meningitis in Dodoma Region between June and last week, Regional Medical Officer Gabriel Upunda said in Dodoma yesterday.

He said 247 people were affected by the disease in 11 villages during the period.

Dr. Upunda said the disease was still a threat in Mlebe, Ikoha and Chanumba villages in Dodoma Rural District. In Mpwapwa, meningitis was prevalent in Ibwaga, Gulwe, Iyomba and Msagali villages.

No case had been reported in Kondoa District.

The RMO said temporary clinics had been set up in the affected areas to avoid transporting victims to hospitals where they could infect other people.

### 'Major Outbreak of Meningitis' Leaves 26 Dead

*EA1410183091 Nairobi KNA in English 0715 GMT 14 Oct 91*

[Text] Kapenguria, 14 Oct (KNA)—At least 26 people have been reported dead and hundreds others feared to be in critical condition following a major outbreak of meningitis in West Pokot District. The outbreak was confirmed by the district public health officer, Mr. Naftali Bundi, who has asked wananchi [citizens] in the district to take preventive measures to curb the spread of the disease.

The disease was first detected last month at Batei, Kipkomo and Sook locations in the Chepareria Division. A senior chief of Sook location, Mr. Thomas Makal, confirmed to the KNA that six people have already died

in his location and another 13 reported dead at Kipkomo location. He said about seven others have died in Batei location.

Confirming the outbreak, Mr. Bundi warned that unless wananchi resorted to adopting preventive measures the cases of meningitis will continue taking its toll. At the same time, Mr. Bundi issued an educational circular to all residents showing the symptoms, predisposing factors of meningitis, preventive measures of stopping and actions to be taken upon detecting victims suffering from the disease. He urged wananchi to seek immediate medical attention instead of consulting [word indistinct] doctors of the diagnosis of the disease. The officer said the district health headquarters had alerted the ministry's headquarters in Nairobi to assist in containing the disease.

When the KNA visited the Kapenguria District Hospital, four wards were confirmed full with patients suffering from the disease. The relatives of the admitted patients had camped outside the hospital's precincts [words indistinct].

#### **Mystery Disease Kills 150 in Bungoma**

91WE0538D Nairobi THE KENYA TIMES in English  
13 Aug 91 p 5

[Article: "Disease Kills 150 People"]

[Text] A mysterious disease, suspected to be measles has claimed 150 lives in Cheptais and Sirisia divisions of Bungoma District in the last three weeks, local leaders said on Thursday.

The leaders, therefore, appealed to the Government to launch immediate investigations, alongside an immunisation campaign to save the lives of many people who have fallen victims.

Three Bungoma County Councillors, Robert Wanyela, Jackson Githache and Mrs. Norah Chemobo claimed that the deaths had risen among children aged between 6 months and 6 years and that the district hospital did not have drugs.

#### **TB Cases Increasing in Nyanza Province**

91WE0538E Nairobi THE KENYA TIMES in English  
25 Jul 91 p 12

[Article: "TB Cases on the Increase"]

[Text] Cases of tuberculosis (TB) among the age group 15-45 years is on the increase in Nyanza Province.

This was said by the Provincial Medical Officer, Dr. Mike Amolo recently.

Dr. Amolo further said that out of 2,842 people who donated blood in 1990 in Kisumu District alone, 436 were HIV positive.

The outgoing Medical Officer for Leprosy and Tuberculosis (MOLT), Dr. Peter Flinkenflogel of Holland who has been in Nyanza Province for the last three years said: "Initial trend of TB showed a decline of annual risk of infection by two percent annually. However, in 1986-89, this decline reversed and is following the AIDS trend."

### **LESOTHO**

#### **Six People in Hospital for Typhoid in Quthing District**

MB2509075191 Maseru Radio Lesotho in English  
1600 GMT 24 Sep 91

[Text] Six people, all residents of Ha Mathabela, Qomomong, in the Quthing district have been admitted at the Quthing Government Hospital suffering from typhoid. The Quthing health inspector, Mr. Mokitimi Tekiso said all the patients are recovering but are still at the hospital.

He said those patients were admitted on Wednesday and Friday last week, and other residents of a village next to Ha Matabela are treated as outpatients. He said the cause of the disease is the uncovered springs from which the people of those villages draw water.

### **MOZAMBIQUE**

#### **Measles Kills 100 Children in Manica Apr-Aug 1991**

MB0810130091 Maputo Radio Mozambique Network  
in Portuguese 1030 GMT 8 Oct 91

[Text] Over 100 children died of measles in Tambara and Guro Districts of Manica Province from April to August 1991. DIARIO DE MOCAMBIQUE newspaper has revealed that in the capital of Tambara District alone, where the epidemic broke out for the first time in April, 67 children died in five months.

Meanwhile, a health source in Tambara District has said the situation has been brought under control after the health authorities began vaccinating the children.

### **NIGERIA**

#### **Minister Reviews Cholera Figures**

91WE0533D Lagos THE GUARDIAN in English  
26 Jul 91 p 1

[Article by Onajomo Orere, Head, Health Desk: "Ransome-Kuti Raises Alarm as Cholera Kills 1,318"]

[Excerpt] Cholera epidemic is ravaging most states and council areas with recorded cases of 10,871 and 1,318 deaths in the past six months, according to Health Minister Professor Olikoye Ransome-Kuti.

The data, described by the minister as "unacceptably high," cover only 13 states and 71 council areas which the Federal task force on cholera control had visited by Tuesday.

"I am equally aware that there is still a large number of cases yet unrecognised and unreported," said Professor Ransome-Kuti yesterday in his second alert on the epidemic in four days.

Giving an update on the epidemic in Lagos yesterday, Professor Ransome-Kuti said in 13 states and 71 council areas, 10,871 cases with 1,318 deaths were recorded between January and July 23. That makes the national case fatality rate (CFR) fall to 12 percent.

But in some states such as Kano and Sokoto, the epidemic has killed 430 and 290 persons.

Sokoto's was particularly worse because between June and July, of the 2,804 who contracted the disease, 290 or about 10.3 percent died.

Kano has had the highest number of cases (4,276), followed by Bauchi, 2,626, with 430 dead or an 18 percent case fatality rate (CFR).

Other states hit by the bacterial disease, their death rates and percentage CFR are:

- Akwa Ibom—58 (four, 6.7 percent);
- Anambra—26 (six, 23 percent);
- Benue—51 (28, 55 percent);
- Kaduna—257 (59, 23 percent);
- Kwara—117 (29, 25 percent);
- Ogun—six (deaths and CFR not indicated);
- Oyo—542 (25, 4.6 percent);
- Plateau—102 (20, 20 percent);
- Ondo—six (deaths and CFR not indicated), and
- Katsina—figures not available yet although over 10 councils were hit.

[Passage omitted]

### **Cholera Epidemic Affects 15 States**

91WE0533C Lagos THE GUARDIAN in English  
2 Aug 91 pp 1, 2

[Article by Onajomo Orere, Head, Health Desk: "Cholera Epidemic Claims More Victims"]

[Excerpt] The cholera out-break has spread to 15 states, killing 2,161 persons—843 more than last week's figure of 1,318.

Lagos and Borno states are the latest addition to the 13 states listed last week.

The Federal director of diseases control and international health, Dr. Gabisiu Williams, told THE GUARDIAN in Lagos yesterday that the only reported sufferer in Ketu area on the northeastern outskirts of Lagos died.

Borno, the hardest hit so far, has recorded 12,029 cases, of whom 839 have died.

On July 23 when the Health Minister, Professor Olikoye Ransome-Kuti, alerted the nation about the outbreak, 12 states had recorded 10,871 cases among whom 1,318 died.

But as of Tuesday, 22,901 cases had been recorded with 2,161 dead or a case fatality rate (CFR) of 9.4 percent.

The figures are expected to rise if Katsina State, where 10 local government areas are reportedly affected, provides figures to the Federal Ministry of Health.

Dr. Williams said that the low CFR should not deceive anyone that the epidemic was on the decline.

He attributed the low figures to the efficacy of the health education championed by the Minister since the outbreak.

Even then, Dr. Williams said a 9.4 CFR was "unacceptably high," citing, for comparison, the two percent CFR of Peru (South America) where an epidemic broke out in February.

Dr. Williams advised all local governments, doctors in private practice, and other health professionals to "immediately notify the Federal Ministry of Health by the quickest means of any single case in their health institutions."

That, he said, would enable the ministry to map out combative strategies and contain its spread.

The Federal Government has asked for the assistance of international agencies to combat the trend, he said.

As of last week, Akwa Ibom State confirmed four of the 58 reported cases had died. Anambra—26 cases, six dead; Bauchi—2,626 cases, 430 dead, Benue—51 cases, 28 dead, Kaduna—257 cases, 59 dead, Kwara—117 cases, 29 dead, Kano—4,276 cases, 430 dead and Katsina—(figures not stated).

Others are: Ogun—six cases, Oyo—542 cases, 25 dead, Plateau—102 cases, 20 dead, Sokoto—2,804 cases, 290 dead, Ondo—6 cases, Borno—12,029 cases, 839 dead and Lagos—one case, one dead.

[Passage omitted]



**Yellow Fever Death Rate High**

91WE0533B Lagos THE GUARDIAN in English  
21 Jul 91 p 2

[Article by Ngozi Asoya: "Yellow Fever Is Major Killer, Says Report"]

[Text] Apart from the scourge of the Acquired Immune Deficiency Syndrome (AIDS), the years 1985 to 1989 witnessed the ascendance of a number of other deadly diseases, according to records available at the Federal Ministry of Health, Lagos.

The latest yearly disease notification report of the Ministry's Disease Control and International Health department, shows that while AIDS killed 14 out of 38 reported cases in 1989, it came behind lassa fever with 22 deaths out of 56 reported cases the same year. Yellow fever came third in the line of deadly diseases of 1989 with 406 deaths out of 2,098 cases.

Other major killers of the period include Cerebro Spinal Meningitis with 968 deaths out of 6,842 cases in 1989 and tetanus with 21.8 percent fatality rate representing 51 deaths out of 608 reported cases in Bornu in 1988. The rate for 1989 was 18.3 percent in neonatal cases, while 6 percent of other types of reported tetanus cases resulted in death, nationwide.

But perhaps the most frightening of all the diseases was Yellow Fever. In Anambra State in 1988, 45 out of 87 reported cases were fatal. This represents 51.72 percent fatality rate.

Similarly, 47 percent of the 437 or 205 of the reported cases in Kaduna was fatal just like four of the reported cases of yellow fever resulted in death in Imo State for the same year out of 24 reported cases.

The records available at the ministry showed that only a few states have their disease notification records complete for 1988. No records for example exist of incidents of disease occurrence in Benue for that year.

Dr. Tokunbo Sangowewa of the Epidemiology unit, Onikan, Lagos said the figures for malaria should be taken with a pinch of salt as not many reported cases of malaria got to the ministry.

He also said they were working hard on the 1990 data which, was still under compilation.

Out of 1,400 reported cases of malaria in 1985, a 1.37 fatality rate was recorded but this grew to 1.91 in 1987; 1,423 victims of malaria died in 1989 out of 984,983 reported cases.

**Unidentified Disease Kills 600 in Bendel State**

91WE0533A Lagos THE GUARDIAN in English  
20 Jul 91 p 19

[Article by Eddy Akpomera, Bendel Bureau Chief, Benin: "Bendel Set To Combat Strange Disease"]

[Text] With an order for one million doses of vaccine, the government of Bendel State is ready to fight a strange disease which has killed 600 people in Ika council area.

Also in its battle plan, which was announced by Health Commissioner Dr. Stephen Ireme yesterday, are mass immunisation, general health education and "symptomatic treatment."

Besides, a distress call has been sent to Health Minister Professor Olikoye Ransome-Kuti and international agencies to save six communities from the strange disease.

An investigation team has attributed the disease's outbreak and spread to three factors:

- community dwellers have low immunity because of acute nutrition deficiency;
- there is chronic shortage of potable water in the area, where villagers drink dirty and infested stream water, and
- poor hygiene standard which fostered disease-carrying vectors.

Ireme acknowledged yesterday in Benin that the disease, suspected to be yellow fever, was spreading, but said it was being contained through mass immunisation. The government has already received 37,000 doses of vaccines.

He blamed the residents of Mbiri, Emuhu, Igeodo, Ekwuoma, Umenede and Owa-Alero villages and nearby settlements for not promptly alerting the Health Ministry of the outbreak, assuring, however, that: "We are treating this issue with all seriousness having regard to the number of people that have lost their lives."

Confirming that 31 persons died at the Agbor General Hospital while 33 were saved, Dr. Ireme lamented the refusal of villagers in the affected communities to be immunised.

According to him, 437,696 persons were immunised against yellow fever in the state between September last year and May this year. About 9,523 at the Bendel State University, Ekpoma, where the latest outbreak killed six persons have also been immunised.

**SOUTH AFRICA****Vaal Triangle Has Higher Incidence of Respiratory Ailments**

MB1809140291 Johannesburg BUSINESS DAY  
in English 18 Sep 91 p 2

[Report by Darius Sanai: "Ailments Linked to Pollution"]

[Text] Vaal Triangle residents suffer levels of bronchitis and respiratory diseases markedly higher than the SA [South African] average because of the high pollution levels in the area, a new study has found.

The Vaal Triangle Air Pollution Study, being conducted by scientists from the independent Pretoria-based Research Institute for Environmental Diseases, shows that people living in the Vaal Triangle run a greater risk of contracting bronchitis and upper respiratory tract diseases.

Allergies are also more common in this area than the national average.

A source close to the project—who spoke on condition of anonymity—said yesterday that the illnesses were directly linked to the high levels of particle pollution in the area.

Smoke from township coal fires and from heavy industry in the area was responsible for the air pollution, the source said. The exact contributions by each source was not yet known, but would become clearer later in the project, and through the findings of a "source apportionment study" being carried out by Wits [Witwatersrand] University scientists.

More than 10,000 white children and 1,500 black children were being tested in the environmental diseases institute study, which is still in its early stages.

The source said sulphur dioxides levels had been found to be within safety limits.

But particulate, as distinct from gaseous, pollution in the area was much higher than average. The offending pollution consisted mainly of carbon and iron compounds, which came from the Iscor [South African Iron and Steel Corporation], Usko [expansion unknown], Samancor [expansion unknown], Eskom [Electricity Supply Commission] and SASOL [South African Coal, Oil and Gas Corporation] plants.

## SWAZILAND

### Seven Die From Tuberculosis in September

MB0910075591 Mbabane *THE TIMES OF SWAZILAND* in English 9 Oct 91 p 24

[Report by Vusie Ginindza: "TB Kills Seven"]

[Text] Tuberculosis [TB] has killed seven more people last month, September 1991.

This brings the figure to 53 people who have been killed by the disease since the beginning of this year.

Over a thousand cases of TB have been recorded by the TB unit in Manzini this year.

The seriousness of the disease has, as a result, necessitated the education of TB awareness through Health motivators around the country.

The campaign started two months ago in a bid to curb the escalating death rate by educating the closest nurses to the public, popularly known as the Rural Health Motivators [RHM] (Bagcugcuteli).

About 18 Tinkhundla [traditional communities] in Manzini and Lubombo have already been visited by a team led by a TB specialist based in the Manzini TB Centre, Dr. C. Mabuza, teaching the motivators so that in turn, they teach members of the communities about the dangers of the diseases and how it can be prevented.

"We go for the RHMs because they are the people who mix most with the public as opposed to the TB nurses who spend most of the time in labs and offices," she had stated.

"We mainly hope to achieve early detection of the disease and we hope that the RHMs will play a great role in educating others and especially encouraging patients to continue with medication."

In regard to the unavailability of a TB clinic, Dr. Mabuza said the Government has arranged to house TB patients in what she called Regional Units.

This, she said, will helpfully [word as published] save patients of the trouble of travelling long distances to Manzini where the only TB hospital in the country is.

"Most patients do not go to hospital, or if they do, they go very late because of the distance of the hospital. TB is very easy to cure in its early stage.

## TANZANIA

### Meningitis Hits Kagera Sugar Factory

91WE0536A Dar es Salaam *SUNDAY NEWS* in English 28 Jul 91 p 1

[Article: "Meningitis Hits Sugar Factory"]

[Text] The Kagera Sugar Factory has been placed under quarantine following an outbreak of meningitis in the area Sugar Development Corporation SUDECO General Manager George Mbatia told *Shihata* yesterday.

Ndugu Mbatia said four people had so far died from the disease in the area. Four others were admitted at Bukoba Hospital.

"Due to the spread of meningitis at the factory, the company will halt processing of Sugar for the 1991/92 season," Ndugu Mbatia said. He added that as a result, there was acute shortage of sugar-cane cutters.

According to Ndugu Mbatia, the company usually recruits cutters from Mwanza.

### Meningitis Kills 34 in Mwanza Region

91WE0536C Dar es Salaam *DAILY NEWS* in English 5 Aug 91 p 1

[Article: "Meningitis Kills 34 in Mwanza"]

[Text] Thirty-four out of 224 people affected by meningitis have so far died since the epidemic was reported in Mwanza Region last month.

The Mwanza Regional Commission Ndugu Philip Mangula, told *Shihata* yesterday that 69 others suffering from meningitis were admitted in different hospitals in the region.

According to Ndugu Mangula, Geita District had 68 meningitis patients while Sengerema had 57 such cases "other patients are in Mwanza, Kwimba, and Ukerewe District," Ndugu Mangula added.

Ndugu Mangula, who visited Geita District recently, has prohibited preparation and consumption of all types of local brew, performance of traditional ngomas and overloading of passengers in vehicles as a measure to control the spread of the air-borne disease.

He has called upon all Mwanza Region residents to ensure that they have big windows in their houses, especially sleeping rooms to allow enough ventilation and sunlight.

Last week, the Mwanza Municipal Medical Officer, Ndugu Zebedayo Sekirasa, cautioned highly populated institutions in Mwanza to adhere to hygienic requirements to prevent the spread of the killer disease in the area.

He mentioned the symptoms of meningitis as high fever, diarrhoea, chronic headache, and eventually serious pains on the neck leading to the patient's failure to turn his neck.

### **Meningitis, Cholera Outbreaks Reported**

*EA1709110091 Dar es Salaam Radio Tanzania  
Network in Swahili 1700 GMT 16 Sep 91*

[Excerpts] Sumbawanga—Meningitis is spreading fast in Mpanda District, Rukwa region, where 13 people have so far died from the disease and another 48 have been admitted to the hospital. The Rukwa regional medical officer of health, Dr. Fawsin Njau, said the disease broke out towards the end of last month in three areas including Mpanda town. [passage omitted]

Meanwhile, the regional medical officer said there is an outbreak of cholera in Nkasi District on the shores of Lake Tanganyika, where seven people died and another 45 are suffering from the disease.

## **Togo**

### **Health Minister Gives Figures for Cholera**

*AB2109201091 Paris AFP in English 1903 GMT  
21 Sep 91*

[Excerpt] Lome, Sept 21 (AFP)—Twenty people died from cholera and 2,500 other cases of the disease were reported recently in the Tone district in Togo's far north, Health Minister David Ekoude Ihou said Saturday [21

September]. Dr. Ihou said a national campaign to spread information about the deadly disease had been launched since an epidemic broke out in June. [passage omitted]

## **ZAIRE**

### **Tuberculosis Resurgent in Haut-Uele**

*92WE0111A Kinshasa ELIMA in French  
29 Aug 91 p 12*

[Article by Bayo, regional bureau report: "The Anti-Tuberculosis Center Overflowing With Patients"]

[Text] There has been a worrisome resurgence of tuberculosis cases in the subregion of Haut-Uele, and especially in Isiro. The sanatorium near the general hospital is no longer able to take in the patients that come for care. It is overwhelmed by the growing influx of patients. Its current capacity is 50 beds, but over 200 people have jostled each other at the side gate of the institution since the beginning of the year.

As a consequence, many patients are under ambulatory care. The distribution of cases by age and sex is the same. Women, men, and children are infected indifferently. According to sanatorium officials, it is strongly suspected that tuberculosis is an opportunistic disease of other well-known illnesses, with AIDS ranked first among them.

## **ZAMBIA**

### **Cholera Reported in Luapula Province**

*MB0510080491 Lusaka Zambia National Broadcasting Corporation Network in English 1800 GMT 4 Oct 91*

[Text] Reports from Mansa say a total of 148 accumulated cases of cholera, in which six people have so far died, have been recorded in Mwense District of Luapula Province since the outbreak of the disease a week ago. The most affected area is Mulundu [word indistinct] school has been closed and turned into a treatment center. This was disclosed to Luapula Province Permanent Secretary Comrade Frederick Siyame who had rushed to Mulundu to assess the situation. He was accompanied by Provincial Chief Education Officer Comrade Felix Mupangwe and Provincial Water Engineer Comrade Fred Mulenga.

### **Cholera Kills 56; 408 Cases Reported in Luapula Province**

*MB0910192891 Lusaka Zambia National Broadcasting Corporation Network in English 1800 GMT 9 Oct 91*

[Text] Fifty-six people have so far died in Luapula Province from the 408 cases of cholera reported since the recent outbreak which originated from Zaire.

The Ministry of Health's permanent secretary, Dr. Evaristo Ngelesani, said in Lusaka today that of the 408 cases reported, 139 cholera patients are in treatment centers, while 213 have been discharged.

Dr. Ngelesani said the ministry has already dispatched additional health workers and medical supplies to

contain the epidemic on the Zambian side of the border with Zaire. He added that the Zambian medical team was collaborating with their Zairian counterparts to help control the epidemic. Dr. Ngelesani has advised members of the public living in the border areas to refrain from crossing into Zaire's Shaba Province until the situation improves.

### **Song Ping Congratulates Production of Abortion Medicine**

*OW1909143591 Beijing Central Television Program  
One Network in Mandarin 1100 GMT 19 Sep 91*

[From the "National News Hookup" program]

[Text] [Video opens with wide shots of conference hall with a red banner reading: "The State Pharmaceutical Administration's News Briefing on the Production of Kayunshuan, A New Medicine Under the First National Category of Pharmaceuticals, by the Dongbei General Pharmaceutical Factory"; video changes to show two unidentified men reading from scripts] The Dongbei General Pharmaceutical Factory recently developed Kayunshuan, a medicine for stopping pregnancies and inducing abortions by non-surgical means. Song Ping, member of the Standing Committee of the CPC Central Committee's Political Bureau, sent a congratulatory letter on the production of Kayunshuan.

In his congratulatory letter he said: The successful development and formal production of Kayunshan, a new medicine under the first national category of pharmaceuticals, signals our country's entry into the advanced world ranks in developing birth control and regulatory medicines. This is significant to the implementation of family planning and the protection of women's health.

Kayunshuan is one of the safest and most efficacious medicines designated by the World Health Organization for inducing abortions by non-surgical means. The Dongbei General Pharmaceutical Factory's product has an overall efficacy rate of over 90 percent, according to clinical tests run by Beijing Xiehe Hospital and others. [video shows bottles of medicine with labels reading "Kayunshuan—Dongbei General Pharmaceutical Factory"]

### **Official on 'Low' Epidemic Death Toll in Flood Regions**

*HK0210085491 Beijing CHINA DAILY in English  
2 Oct 91 p 1*

[Article by staff reporter; "Epidemics Checked in Flood-hit Regions"]

[Text] There were fewer deaths from epidemic diseases this year compared with last year, despite this summer's serious floods, according to the country's top health official.

There had been no reports of cholera, typhoid, malaria or encephalitis B epidemics by last month, said Chen Minzhang, Minister of Public Health.

Chen said that eight of the flood-hit provinces saw increased incidence of epidemic diseases, mostly intestinal illnesses, in July and August, yet the number of deaths was low thanks to immediate anti-epidemic techniques. The situation was under control and improving.

The minister did not specify the number of deaths.

He attributed the achievements to timely efforts by governments at all levels and also to co-ordinated work among the central and local departments concerned.

The State Council had earlier set up a "national disaster-relief and disease-control leading group" headed by State councillor Li Tieying, to guide and co-ordinate different State departments.

The State policy of "prevention first" had been successfully implemented down to the grassroots, and health services across the country had been mobilized in the national campaign against epidemic diseases.

Both the central and local medical and health care network and the anti-epidemic teams at different levels have played key roles in the work, Chen said.

Incomplete statistics revealed that by the end of July, about 7,000 medical and anti-epidemic teams involving around 80,000 medical personnel had been sent to the disaster-hit areas by the Ministry of Public Health and governments in nine provinces, including Anhui, Jiangsu, Hebei and Henan.

Anhui alone sent out 2,663 medical and anti-epidemic teams, comprising some 36,000 health workers and officials.

Anti-epidemic drugs valued at 26 million yuan (\$5 million) were distributed to flood victims.

A week-long national patriotic health campaign was launched last week to improve environmental sanitation.

Some 1,860 temporary toilets have been built in the flood-hit areas in Anhui, and 532,500 wells have been cleared and sterilized. The province has also built 11,400 hand-pumped wells to provide drinking water for the locals.

In Jiangsu, more than 55,000 people were mobilized on the first day of national patriotic health week to clear away 1,500 tons of rubbish.

Chen warned that people should remain on guard against epidemics since the situation in the disaster areas was still "severe."

Many flood-victims are still living in poor conditions, and village medical health care facilities are still not operating.

Hu urged governments at all levels to continue their anti-epidemic drive, which should last till next spring.

Measures must be taken to tighten up epidemic surveillance and the three-tiered (province-county-village) medical network must be renovated as soon as possible.

**Largest Animal Vaccine Producer Becomes Operational**

*OW0710152991 Beijing XINHUA in English*  
1252 GMT 7 Oct 91

[Text] Nanjing, October 7 (XINHUA)—The country's largest production base for animal vaccines began operation last Sunday in the Nanjing Medical Apparatus Factory.

The new project will turn out 15 kinds of animal vaccines with a total yearly output of two billion doses.

## CAMBODIA

**Spread of Disease in Kompong Speu After Flooding***BK2309070991 Phnom Penh SPK in English  
1121 GMT 21 Sep 91*

[Text] Phnom Penh SPK September 21—About 28,500 persons have been infected with diseases following the recent floods in Kompong Speu Province.

Floods occurred in the province of Kompong Speu, part of Kampot, Takeo, Kandal, and most of the riverine provinces as well as the suburban district of Phnom Penh City as a result of torrential rains in the central high-lying regions in mid-August.

The floods caused considerable damage to thousands of hectares of rice crops and the social infrastructure, and the loss of scores of human lives.

In the past few days about 28,500 persons were infected with diseases due to unhygienic living conditions. Of these 2,300 suffered from diarrhea, 1,000 from stomach ache, 3,000 from influenza; and 2,000 from skin diseases. But with the devoted effort of the local health workers and the assistance of "Medecins du Monde" and the "World Health Organization", none of them have died from these infectious diseases.

Two medical teams were sent by the health care service of the province to Samraong Tong and Phnom Sruoch Districts and the provincial town to treat the sick persons. They also recommended measures to the local people to prevent the epidemic diseases from spreading.

The "Calmette" and "Buddhist Monks" hospitals in Phnom Penh also sent 10 medical workers to set up three provisional health stations to treat the patients there.

"That the morbidity rate has been kept down is attributable to the assistance of the "Medecins du Monde" and the "World Health Organization", including the personal efforts of their staffs and the supply of medicines and medical equipment to provincial hospitals," said a provincial health official.

During the four-day flooding, nearly half of the 700 drinking water wells in the whole province were destroyed or seriously damaged and polluted.

The health care service of the province has called on the Health Ministry, international humanitarian institutions and charity people to continue to give more aid to restore the potable water network in Kompong Speu, said another provincial health official.

**Dirty Water Everywhere But Not a Drop To Drink***BK0110042291 Hong Kong AFP in English 0126 GMT  
1 Oct 91*

[Article by Sheri Prasso]

[Text] Phnom Penh, Sept 30 (AFP)—The water in Cambodia's capital is so disgustingly undrinkable that the city is pleading for help.

"We have an emergency need for fresh water supply in Phnom Penh," said city Vice Mayor Kry Beng Hong who is in charge of water works.

So far, a Japanese and a French company have put forward proposals, but no grand plans have been finalized.

Twenty years of war and neglect have left this Indochinese country's infrastructure a mess.

Its water treatment plants are almost totally ineffectual. Only 20 percent of Phnom Penh's homes have running water, and 85 percent of its population live with water-borne parasites in their intestines.

Last week, the Council of Ministers voted to allow the city government to do whatever is necessary to improve the situation, Kry Beng Hong said—especially ahead of the influx of foreigners expected here after Cambodia's warring factions sign a peace agreement in late October.

On Thursday the municipality signed a cooperation agreement with the French company Degremont to send emergency equipment to a decrepit Soviet-built water treatment plant.

"We would like this French company to rehabilitate the whole network, the whole treatment system, because our government has no budget and no equipment parts to do it," he said.

Degremont's parent company Lyonnaise des Eaux is discussing taking over the entire water works system, and the financial details will be worked out in mid-October, Kry Beng Hong said.

The Japanese company Kubota has offered five million dollars worth of equipment to treat Phnom Penh's water, but the Council of Ministers has not yet agreed to the grant, he said.

But even if work begins tomorrow, Phnom Penh's water will not be drinkable for at least five, or maybe 10 years.

"There is quite a lot of contamination between the drinking water and the sewage water," he said. "Sometimes the junction of a sewer pipe goes directly into the drinking pipe system."

The result is raging typhoid fever, hepatitis and dysentery among Phnom Penh's population.

The pipes carrying water into the city's houses are up to 50 to 70 years old, and as much as 45 percent of the water leaks away into the ground through cracks and bad pipe fittings before reaching its destination, Kry Beng Hong said.

The capital used to get all its water from a filtration plant along the Mekong River, but the pipe carrying it into the city was cut during the Khmer Rouge regime and

attempts to replace it with a Soviet-built filter have been inadequate, a long-time city resident said.

With the recent problems in the Soviet Union, spare parts are no longer available and the filters are no longer functioning properly, he said.

According to a recent door-to-door study carried out by humanitarian aid organization World Vision International, nearly every Cambodian in Phnom Penh drinks this contaminated water because even the fuel to boil it is too expensive.

About 17 percent of people here take their water directly from the muddy Mekong and Tonle Sap rivers, which meet at the capital, World Vision found.

Another 38 percent buy barrels of untreated water from street vendors who draw from private wells or ponds.

Those who can afford it—the expatriates and the very rich—buy bottled water which at about 18 cents per half litre is a fortune to most families here.

"For one bottle of that (water) they can buy maybe one kilo (2.2 pounds) of rice," said Dr. Wesley Vargas, who manages World Vision's Urban Child Health Program.

Still, there is so much fecal matter floating around that even the most picky eaters get sick anyway.

"Many of the foreigners get diseases related to water in the first two weeks, even if they eat in good restaurants," Vargas said.

The city's only luxury hotel, the Cambodiana, where fresh drinking water is plentiful, is not immune.

"Even at the Cambodiana, people still get diarrhea," he said.

### **Malaria Cases in Kompong Speu Province**

*BK0910091291 Phnom Penh SPK in French 0358 GMT 9 Oct 91*

[Text] Phnom Penh 9 Oct (SPK)—Some 6,600 people affected by malaria have been registered during the first eight months of this year in Kompong Speu Province, about 50 km west of Phnom Penh; Phnum Sruoch, Aoral, and Bar Set Districts are the areas most affected.

To fight against malaria, which generally occurs in hilly areas, health workers in the province have conducted campaigns to familiarize people with hygiene prophylactic measures and have also assisted people in taking preventive measures.

In the meantime, over 42,500 children have been vaccinated against the six common diseases. Moreover, the provincial health service has assisted people in digging 450 cesspools and 16 wells with lips and restoring 76 others.

## **INDONESIA**

### **Over 100 Diarrhea Deaths in Central Kalimantan**

*BK1110030491 Jakarta THE JAKARTA POST in English 4 Oct 91 p 11*

[Text] Jakarta (JP)—A total of 115 people in the province of Central Kalimantan have died from diarrhea since May.

Dr. Arnold Singarimbun, acting head of the area health office, said 8,941 patients had been saved, ANTARA reported Wednesday.

He said that the local hospitals and health centers had sufficient supplies of medicine which were shipped six months ago to remote areas in the province.

"All the victims and the patients are people living on the river banks. They consume river water everyday," he said.

He said that the river water had become severely polluted during the dry season. "Dumping of waste into the river deteriorates the situation."

Last year a similar epidemic killed 89 people, he said.

In Samarinda, the capital of East Kalimantan, diarrhea has killed four people and hospitalized 2,000 others.

## **SOUTH KOREA**

### **Government To Lift Caution Concerning Cholera Epidemic**

*SK0810083891 Seoul YONHAP in English 0745 GMT 8 Oct 91*

[Text] Seoul, Oct. 8 (OANA-YONHAP)—South Korea's cholera epidemic is over and the caution posted for the country will be officially lifted Saturday, the Health and Social Affairs Ministry said Tuesday.

The last cholera case was reported in South Kyongsang Province on Sep 17 and there have been no new outbreaks, probably as the cold weather has affected the cholera germ, the ministry said.

The ministry informed the world health organization and the Japanese Government of the end of the epidemic Sep 30.

In the middle of October, the temperature of the sea in Korea drops below 16 degrees celsius, which stops the cholera germ from reproducing, so it is safe to eat seafood again, a ministry official said.

As there might still be carriers, he said, people should avoid sharing dishes.

After an absence of 11 years, cholera was reported in Korea in August and infected 113 people, of whom four died.



## LAOS

**Malaria Cases in Attapeu Province**

*BK0110122691 Vientiane Vitthayou Hengsat Radio Network in Lao 1200 GMT 30 Sep 91*

[Text] A KPL correspondent reported from Attapeu Province that 5,523 people have contacted malaria in the four districts of the province since the beginning of this year. Out of this number, over 2,000 are infected with falciparum malaria and some 50 [words indistinct]. It was also reported that during the same period over 600 malaria patients were admitted for treatment in the hospitals in the province. Eighty-eight of them were listed as severe cases.

**Malaria Outbreak in Luang Prabang Area**

*BK0810040391 Vientiane Vitthayou Hengsat Radio Network in Lao 0000 GMT 8 Oct 91*

[Text] Recently, a malaria epidemic was reported to have occurred in Pakseng District, Luang Prabang Province. So far, more than 200 persons have been found to be afflicted with the disease, especially those living in Ban Hat Phan village.

In the face of this epidemic outbreak, the district public health service has sent medical cadres on anti-malaria campaigns among the people. So far, some of the victims have already been cured after receiving medical treatment.

**Activities To Control Schistosome Mekongi**

*BK1709121591 Vientiane KPL in English 0910 GMT 17 Sep 91*

[Text] Vientiane, Sept 17 (KPL)—Medical workers of the Malaria and Parasitology Institute under the Ministry of Public Health have recently been dispatched to Khong District, Champassak Province. The mission is to control the spread of the schistosomiasis Mekongi and to distribute medicine to affected people.

During their two-week activities late last month, 40 percent of the total 44,371 inhabitants of Khong have got medicines. The distribution of medicines will continue.

The schistosomiasis Mekongi is uniquely found active only in this southern district.

The schistosomiasis Mekongi is an infectious parasite living on a kind of mollusc as large as half of a paddy seed in size. It floats on the surface of the water and is capable of infiltrating into a man physically while he takes a bath in a river.

The initial stage of the infection is manifested by skin itchiness on the infected area. The bacteria will eventually reach the liver through the skin pores. Other symptoms of the disease include headache, diarrhoea, and lethargy. If the diarrhoea is severe the stool may contain

blood. Unless there is treatment, there will be a hypertrophy of the spleen and a swelling of the abdomen. If the treatment is not taken in time, the patient may die.

**Schistosomiasis Mekongi Infection Reduced in Khong**

*BK3009115891 Vientiane KPL in English 0927 GMT 30 Sep 91*

[Text] Vientiane, Sept 30 (KPL).—The Malaria and Parasitology Institute between August-September this year sent a medical team to Khong District of southern Champassak to distribute for the second year among local people medicines against schistosomiasis mekongi.

The distribution was completed in 13 communes having 118 villages where over 21,000 people had taken the medicine.

An initial estimate by the health ministry has indicated that the effort proved satisfactory since the infection caused by this disease was down by 60 to 80 percent. Interesting enough was the indication that now the parasite is no longer found in the snails, the vectors of the illness.

According to medical advice, practising hygiene along with taking medicines may lead to complete eradication of schistosomiasis mekongi in this island district of Laos.

## MALAYSIA

**Twenty-six More Dengue Cases in Pahang**

*BK2309140391 Kuala Lumpur Radio Malaysia Network in English 1330 GMT 23 Sep 91*

[Text] Another 26 dengue cases, including one hemorrhagic dengue fever—HDF—were reported in Pahang over the last week. This brings to a total of 274 cases since early this year. State Deputy Medical and Health Services Director Dr. Gujran Singh said today 19 of the new cases were reported in Temerloh District, 4 in Kuantan District, and 2 in Pekan District. The new case of HDF occurred in Temerloh District, bringing to eight the number reported in the state.

**Teams Dispatched to Cholera-Affected Sabah Villages**

*BK0410143491 Kuala Lumpur Radio Malaysia Network in English 1330 GMT 4 Oct 91*

[Excerpt] The Sabah Medical and Health Department has sent anti-cholera teams to several villages in Kudat following the discovery of four new cases of the disease and seven carriers yesterday. The department director, Datuk Dr. Michael Chang, said in a statement that with the new discovery, the number of cholera cases in the district so far this year totaled 105. Another 123 carriers were also detected in the area since the beginning of the year. [passage omitted]

## NEW ZEALAND

### Health Official Says Dengue Fever Epidemic Over

*BK0510110891 Melbourne Radio Australia in English  
0500 GMT 5 Oct 91*

[Text] The Cook Islands director of public health, Ronald Daniels, says that Dengue Fever epidemic, which ravaged part of the islands, is now over. During the epidemic, a total of 1,190 cases of the sickness were reported on the islands which have a total population of around 18,000 people. Seven people were reported to have died—three on the atoll of Aitutaki, three on the main island of Rarotonga, and one on Manihiki.

[Words indistinct] now that the epidemic was over, residents of the islands shall be vigilant in eliminating mosquito breeding sites. He said the government will continue to spray these sites with insecticides.

## PHILIPPINES

### Health Department Warns 'Dog-Eaters' of Rabies Outbreak

*HK2609055491 Manila BUSINESS WORLD  
in English 26 Sep 91 p 12*

[Text] The Department of Health (DOH) warned dog-eaters yesterday to refrain from eating stray dog's meat, especially if served raw or "kilawin-style," as this may lead to rabies fatality.

The advisory was aired after the department monitored an increasing trend in incidence of rabies deaths in Metro Manila.

Health Secretary Alfredo R. A. Bengzon revealed transmission of rabic virus is more dangerous via eating rabid dog than being bitten by an infected dog.

He said if the virus is contracted through dog bites, the victim still has a chance to know if the dog is infected with rabies by closely monitoring the behavior of the dog for at least two weeks.

Rabic symptoms, which include profuse salivating, delirium, convulsions and hydrophobia, are manifested earlier by canines, thus infected victims can still seek medication from nearby hospitals.

However, if similar symptoms start to appear in human beings, incubation period takes only two to six days before the affected victims die from respiratory paralysis.

It must be noted that if a bitten, but unaffected person receives anti-rabies vaccination, the erroneous medication may lead to total or partial paralysis, Sec. Bengzon revealed.

The DOH further advised people from inhaling the air-borne virus during the dog-cooking process.

Aside from dogs, other rabies-carriers include cats, skunks, raccoons, mongooses and other biting mammals.

**POLAND****Health Facility Advises Against Buying Food From Soviets**

*LD1210181491 Warsaw TVP Television Network  
in Polish 1615 GMT 12 Oct 91*

[Text] The Walbrzych medical and epidemiological station warns that the city is threatened with an epidemic of jaundice. Four hundred jaundice cases have been reported since the beginning of the year. The inspector of sanitation has announced that he will ask the city's mayor to introduce a temporary ban on street vendor sales of bread and smoked fish. He also advocates ending all self-service operations at bakeries.

The medical and epidemiological station advises against buying food from citizens of the Soviet Union.

**ROMANIA****Daily Warns of Spread of Cholera**

*AU1809103391 Bucharest ROMANIA LIBERA  
in Romanian 14-15 Sep 91 p 2*

[Article by Traian Dobre: "Cholera Is Spreading"]

[Text] People's ignorance has proved particularly dangerous for themselves. In spite of the fact that the physicians and the television daily recommend several minimal cholera-prevention measures—such as washing one's hands and washing or boiling fruit and vegetables—the number of cholera cases is increasing. The number of

declared cholera cases reached 90 at the end of last week, 108 two days ago, and today there are already 112 cases, of which three are in Bucharest. Doctor Constantin Dumitrescu, section chief at the Bucharest's "Victor Babes" Hospital for Contagious Diseases, maintains that with the weather cooling down the odds against catching cholera will grow rapidly.

**YUGOSLAVIA****Red Cross Reports 224,499 Refugees Flee Crisis Areas**

*LD2609043191 Belgrade TANJUG in English  
1427 GMT 25 Sep 91*

[Text] Belgrade, September 25 (TANJUG)—According to today's statement released by the Red Cross of Yugoslavia, 224,499 people fled from the country's crisis areas by last Wednesday. Most of the refugees, 104,000, fled to the republic of Serbia, 80,000 to safer areas in Croatia, and around 35,000 to Bosnia-Herzegovina.

Children under 15 account for 60 percent of the total number of refugees. The Red Cross is trying to pick up information about the fate of the Yugoslav Army members who have been captured or reported missing in Croatia, the statement says.

Meanwhile, the Yugoslav Government calls the hygienic and epidemiological situation in the crisis areas of Croatia "unfavourable." A special government body dealing with the refugees' problems says that a critical health situation has been caused by the cutting of electricity and water supplies, food unfit for human consumption and a shortage of medicaments, sanitary material and doctors.

## ARGENTINA

### Over 1,000 Cases of Measles Verified in Rosario Since July

PY3009190691 Buenos Aires Radio Nacional Network  
in Spanish 1600 GMT 30 Sep 91

[Text] The Public Health Secretariat has verified 1,130 cases of measles in Rosario since early July 1991. It also has been reported that a new shipment of vaccines—with which the vaccination campaign will continue to be carried out, especially among children—has arrived in Rosario.

## BOLIVIA

### Epidemiology Director Reports New Cholera Case

PY1709023691 La Paz La Red Panamericana  
in Spanish 0000 GMT 17 Sep 91

[Summary] The Directorate of Epidemiology has reported that a new cholera case has been detected in a child who ate uncooked vegetables. The director of epidemiology said that 11 cases have thus far been confirmed, while 11 others are being observed.

### Official Says Cholera Virus Detected in Cochabamba

PY1909140591 La Paz Television Boliviana Network  
in Spanish 0200 GMT 19 Sep 91

[Summary] Dr. Roberto Vargas, the national epidemiology director, has confirmed that the vibrio cholerae virus was detected in a sewage facility in the southern zone of Cochabamba. He said that intensive efforts are being made to prevent city residents from getting infected. No more cases have been reported in La Paz Department.

### Two New Cholera Cases in El Alto

PY2109151091 La Paz Television Boliviana Network  
in Spanish 0200 GMT 21 Sep 91

[Summary] National Epidemiology Director Doctor Roberto Vargas has reported that two new cholera cases were confirmed in El Alto. In both cases the infection was transmitted through uncooked vegetables.

### Cholera Detected in Villa Copacabana and Rio Seco

PY2609184391 La Paz La Red Panamericana  
in Spanish 0000 GMT 26 Sep 91

[Summary] The acting director of the Epidemiology Department has stated that two new cases of cholera have been detected, one in Villa Copacabana and the other in Rio Seco.

### La Paz, Alto Beni Report Cholera

PY2709034891 La Paz Television Boliviana Network  
in Spanish 0200 GMT 27 Sep 91

[Summary] Two new cholera cases have been reported in La Paz Department, one in the city of La Paz and the other one in a town in Alto Beni, 70 km from Caranavi.

Acting Epidemiology Department Director Dr. Rosario Quiroga has reported that these two new cases must be added to the 26 cholera cases already reported up to yesterday.

### Five New Cholera Cases in La Paz Department

PY0410233491 La Paz Television Boliviana Network  
in Spanish 0200 GMT 2 Oct 91

[Summary] Five new cholera cases have been reported in Rio Abajo and in El Alto, La Paz Department. National Epidemiology Department Director Roberto Vargas has reported that 39 cases have been detected thus far, of which 23 have been confirmed.

### Three New Cholera Cases in El Alto, Rio Abajo

PY0510213691 La Paz Radio Fides Network in Spanish  
1100 GMT 5 Oct 91

[Summary] National Epidemiology Department Director Dr. Roberto Vargas reported that three new cases of cholera were reported in the El Alto and Rio Abajo area on 4 October.

### Cuban Officials Arrive To Help Combat Cholera

PY0810172391 La Paz Television Boliviana Network  
in Spanish 0200 GMT 8 Oct 91

[Text] Seven weeks after cholera began to spread in Bolivia, cases continue to be reported. According to National Epidemiology Director Roberto Vargas, raw vegetable consumption is the main cause for the 27 confirmed cases and for another 20 cases that are considered probable. He said:

[Begin recording] More cases were reported this week. Some 47 cases have already been registered, including confirmed and probable cases. Of these, 28 were registered in Rio Abajo, seven in La Paz, 10 in El Alto, one in the Beni uplands, and one in the Achocalla Valley.

We have thoroughly studied the problems created by raw vegetable consumption, about which we already talked on Friday. We have found a very important link between vegetable consumption and cholera cases. We again recommend people to boil all vegetables. We are very concerned. Some 60 percent of all the cholera cases were registered in Rio Abajo where the rate is very high, and new cases continue to appear. [end recording]

Two Cuban Health Ministry advisers have come to Bolivia to discuss the struggle against cholera. Jorge Delgado explains the reason for their visit:

[Begin recording] We are highly honored because we have come to Bolivia at the request of Bolivian Health Ministry authorities. We will try to guide them, to learn, and to work together. This is the reason why we came to Bolivia. [end recording]

### **Thirty-one Confirmed Cholera Cases, 4 Deaths Registered**

*PY0910163891 La Paz Television Boliviana Network in Spanish 0200 GMT 9 Oct 91*

[Summary] On 4 October, a one-year-old girl died of cholera at a health post in Guaricana, Rio Abajo. A total of 52 cholera cases, of which 31 have been confirmed, have been registered; 21 have been reported as probable. Thus far, 23 people have been hospitalized and four have died.

## **BRAZIL**

### **More Than 140 Cholera Cases in Upper Solimoes**

*PY2509130291 Brasilia Voz do Brasil Network in Portuguese 2200 GMT 24 Sep 91*

[Summary] Cholera cases in the Upper Solimoes, Amazon region, reportedly have reached 142. In September alone, 17 cases were confirmed, and 17 others are under observation to detect the disease.

### **Cholera Cases Drop 50 Percent in Amazon State**

*PY0810175791 Brasilia Radio Nacional da Amazonia Network in Portuguese 1000 GMT 8 Oct 91*

[Text] Disease Control Secretary Baldur Shubert has reported that cholera cases have dropped by 50 percent in Upper Solimoes, Amazon State, in the past 30 days. He said that 80 cholera cases were registered in August, that is, 20 per week, and that during September just 15 cases were registered in the first week, nine in the second week, and only three or four cases in the third and four weeks.

## **COLOMBIA**

### **Cholera Cases in Antioquia Detailed**

*91WE0524A Santa Fe de Bogota EL TIEMPO in Spanish 13 Aug 91 p 8A*

[Text] The cholera situation in the country worsened over the weekend, especially in Cauca and Choco. Also, the first cases in Turbo (Antioquia) were recorded, and three more people died of the illness.

According to the Health Ministry, so far 4,869 people have contracted cholera in Colombia and 88 have died.

The situation has grown worse in some regions, which has caused health authorities throughout the country to be on the alert once again. Thus, in Cauca 300 new cases were reported, for a total of 1,171; 194 of the new cases are in Puerto Tejada, 45 in Caloto, and 20 in Guapi.

Meanwhile, in Choco the count has increased to 369, with 60 new cases, 41 of them in Istmina. The first 9 cases have been recorded in the municipal jurisdiction of Riosucio.

In addition, 22 cases have been reported in Valle, where a total of 1,451 patients have contracted the disease. Three new ones have been reported in Huila, bringing the total to 31; and the first 5 patients have been treated in Antioquia, in Turbo.

Deaths have been reported in Turbo (Antioquia), Lopez de Micay (Cauca), and Tolima.

In Tolima, moreover, the second cholera death has occurred. Desideria Ortiz, 57, contracted the illness in the village of Cyarco in Coyaima, and died at the San Carlos de Saldana Hospital.

Previously, Paulina Ducuara of the village of Mesas de Inca, Coyaima, was the first person to die in the epidemic that has spread in that sector.

In Tolima, the official count is 57 cases of cholera. The latest case to be reported was in a village in the municipal jurisdiction of Suarez.

### **Cholera Cases Increase in Choco**

*91WE0524B Santa Fe de Bogota EL TIEMPO in Spanish 15 Aug 91 pp 1A, 8A*

[Text] The cholera epidemic has taken off in the last two days in some regions of the country: 159 new cases and 10 deaths were confirmed by the Health Ministry.

According to the statistics, the regions hardest hit by the epidemic are Choco and Cauca. Next in order, in terms of increases in the number of cases, is Turbo (Antioquia), and the first cases have been reported in Popayan, Padilla, Piendam, and Tunia, in northern Cauca, as well as Pasto.

As of 12 August there were 4,869 patients diagnosed with the disease and 87 deaths. The latest report indicates 5,028 cases and 97 deaths. The most critical situation is in Choco, where the number of patients has grown from 369 to 480, and the number of deaths from 29 to 36.

As recently as Monday, 9 cases were confirmed in Riosucio, in northern Choco; yesterday there was talk of an additional 74. Furthermore, 7 people have died from the bacteria in this area.

So far, the following cases have been reported: 12 in Quibdo, 33 in Bahia Solano, 39 in Pie de Pato, 32 in Nuqui, 213 in Istmina, 66 in Pizarro, 2 in Tado, and 83 in Riosucio.

In the Cauca region, meanwhile, 1,190 cases of cholera and 38 deaths have been reported. The latest 3 deaths occurred in Padilla, Tunia, and Popayan, where the epidemic is now beginning to show up. Those three areas have 13, 2, and 1 cases, respectively.

The remaining patients are in Narino (1,750), Valle (1,452), Tolima (70), Huila (40), Cundinamarca (1), Santander (2), Caldas (4), Cordoba (1), Santa Fe de Bogota (3), and Turbio, Antioquia (12). The deaths have occurred in Narino (8), Cauca (38), Valle (12), Choco (36), Tolima (1), Huila (1), and Antioquia (1).

The presence of the illness in Antioquia has prompted authorities to declare a state of emergency in the hospitals. This will enable them to take all the necessary measures to control the epidemic.

Twelve patients treated in Uraba tested positive for cholera, according to Enrique Silva Pizano, chief of the Health Ministry's National Office of Emergency and Disasters.

The patients involved are hospitalized at the San Jose Hospital in Turbo. Another 13 patients suspected of carrying the disease are being hospitalized there as well. An additional 10 patients are being treated at the Apartado Medical Unit.

A commission of the department's Sectional Health Service, experts from the University of Antioquia, and brigades from the Social Security Institute will participate in fumigation, prevention and treatment activities in the 11 municipal jurisdictions of this region.

Uraba is vulnerable to the spread of the epidemic, given its proximity to Choco and the municipal jurisdiction of Valencia, in Cordoba, where cases of cholera have already been reported.

In view of the presence of cholera in Uraba, the Metropolitan Health Institute (Metrosalud) has stressed the need to step up measures to control and prevent the disease. It is becoming increasingly evident that the epidemic is encroaching on Medellin, given that it has shown up in Uraba.

Metrosalud has reminded the community of the hygienic practices that must be followed, the need to cook food well and wash it in boiling water, and to wash hands before eating and before and after going to the bathroom.

It has also been decided to step up inspections at the Olaya Herrera Airport and the Transit Terminal in Medellin, where the Port Sanitation Committees are operating. In addition to the epidemiological controls on food that is brought into the area, basic information is being provided so that people with cholera symptoms will know where to go.

### Status of Cholera Cases, Deaths Reported

91WE0558A Santa Fe de Bogota EL ESPECTADOR  
in Spanish 24 Aug 91 p 3B

[Text] Santa Fe de Bogota—Six months after entering Colombia through the port of Tumaco, and despite the efforts to control it, cholera continues to spread unchecked throughout Colombia.

In recent days, however, its destructive action has been felt with increased severity, inasmuch as between Thursday and Friday 11 new deaths were recorded in Choco and another case of the disease was reported in Girardot.

This reactivation of the disease is demonstrated by the fact that 237 probable new cases and 11 deaths have been reported in the past 48 hours.

A total of 47 deaths have been reported in Choco, 38 in Cauca, 12 in Valle, eight in Narino, and one each in Huila, Tolima, and Antioquia.

As one can see, however, the official report prepared by the Ministry of Health and the National Office for Disaster Relief does not list the two deaths in the Antioquia Department towns of Turbo and Apartado in the middle of this week. If these two deaths—which were confirmed by the Sectional Health Service of that department—are counted, deaths from cholera in Colombia total 110.

### Catastrophe in Choco

The statistical report discloses that these 11 most recent victims were recorded in the towns of Pizarro, Istmina, and Bahia Solano, all of which are in Choco Department, where the disease has found conditions favorable for propagation in the precarious infrastructure of sewer and water services and in existing sanitation conditions, which are deficient.

According to Dr. Ferney Navarro, MD, director of the Julio Figueroa Villa Hospital in Bahia Solano, the two fatalities have been identified as Juan de la Cruz Sanclemente, 48, who died on 29 July; and Cefora Torres Castaneda, a little girl only eight years old, who died on 16 August.

Concerning the little girl, the doctor declared that "the difficulty in obtaining fuel, and the violent winter weather, prevented her from being moved from the Valle municipality to the nearest clinic, which was in Bahia Solano, 18 km distant, and as a result she became dehydrated and died 12 hours later."

This serves to highlight the fact that the marginal existence lived by most of the communities in this department is the principal reason for the steady death toll.

### Spreading From Its Point of Entry

The statistical report also makes it clear that the cholera is no longer spreading in the region where it made its

entry six months ago—that is to say, the southern Pacific coast—and it has been advancing toward other regions.

The first confirmed cases have accordingly been reported in the departments of Bolivar, Santander, Huila, Tolima, Caldas, Antioquia, and Cundinamarca. In Cundinamarca, a second case was discovered yesterday in the port of Girardot.

Cholera in Colombia		
Department	Municipalities Affected	Deaths
Choco	9	47
Cauca	17	38
Valle	12	12
Narino	14	8
Huila	12	1
Tolima	10	1
Antioquia	2	1
Cundinamarca	1	0
Santander	1	0
Caldas	2	0
Cordoba	1	0
Bolivar	1	0
Santa Fe de Bogota	—	0
Total	82	108

Source: Ministry of Health

## DOMINICAN REPUBLIC

### Twenty-nine Children Dead From Typhoid, Measles in Capital

*FL2609195491 Santo Domingo Cadena de Noticias in Spanish 1600 GMT 26 Sep 91*

[Text] The number of children who have died in the La Cienaga neighborhood of the capital in less than 48 hours has risen to five as a result of the typhoid fever and measles that affect that area. The latest fatality has been identified as Jeffrey Solano, nine months old. With the death of Solano, the number of children that have died in La Cienaga since it has been hit with these diseases has risen to 29.

The death of the children continues despite the measures that the authorities have taken. Now, more than 20 children are affected with measles, vomiting, diarrhea, gastroenteritis, and typhoid fever. The current situation in La Cienaga remains very dangerous for the people residing there.

## MEXICO

### Puebla, Chiapas Cholera Cases; Vaccine Research *91WE0559B Mexico City LA JORNADA in Spanish 27 Aug 91 pp 48, 19*

[Text] Puebla—Since the Puebla Coordinated Health Services confirmed the existence of 112 cases of cholera, which have so far resulted in six deaths in the town of Santiago Miahuatlan, the Chiapas Interinstitutional Health Coordinator has disclosed that 65 cases of that disease and two deaths have been confirmed in the border region with Guatemala.

Meanwhile, in Cuernavaca, the National Public Health Institute announced that it is testing a cholera vaccine based on biogenetic engineering. The project leader is researcher Mayrpon Levine, of the Center for Vaccination Development at the University of Maryland, in the United States.

According to the LA JORNADA DE ORIENTE report, Puebla Coordinated Health Services Director Guillermo Salomon Santibanez claimed that the intensive surveys carried out by the epidemiological brigades in the poorer sections of Santiago Miahuatlan, near Tehuacan, resulted in 40 new cases of cholera being detected.

The official stated that 25 of these required hospital treatment and the rest were treated as outpatients.

The state official said, however, that so far no outbreak of cholera has been detected in the town of Huehuetla in the northern sierra, because a quarantine has already been established in the region to monitor the quality of the wells to prevent the zone from becoming another source of propagation.

In addition, he announced the initiation of an educational orientation campaign, in which some church representatives will participate, the objective of which is to counteract the spread of the disease.

Santibanez also claimed that in this regard, it is important to incorporate the fundamental role of teachers, since a program of "sanitation capacitation" can be activated through these mentors.

However, in Tuxtla Gutierrez, Chiapas, the National Epidemiological Research Institute—INDRE—and the IMSS [Mexican Social Security Institute] laboratory in the border city of Tapachula have confirmed the existence of 65 cases of cholera.

In the Operation Suchiate document—in which the Health Secretariat, the IMSS and the State Coordinated Health Services combined their efforts—it was indicated that the people who recently died were Joaquin Gutierrez Ramirez of Tapachula, and Manuel Vilchis Hernandez of Suchiate.

Information from correspondent Candelaria Rodriguez indicates that 48 cases have been detected since 21 August, 44 of which were confirmed by the IMSS laboratory.

In addition, the Operation Suchiate document indicates that in the towns of Motozintla, in the Sierra; Huixtla, in the Soconusco region; and Tonalá, on the Chiapas coast, there are 25 suspected cases of cholera.

The correspondent reports, however, that the silence on the part of the Health authorities continues despite the continuing cases of severe diarrhea and gastroenteritis.

In Cuernavaca, Dr. Levine told the correspondent for this paper, Francisco Guerrero, that the new vaccine, which is in an experimental phase, works through genetic engineering; that notable advances, such as tolerance and immunization, have been achieved; and that given the consistency of the results in the areas it has been tried, such as Thailand and Indonesia, it can be said that success is assured. He added that expanding the new vaccine to the American continent, particularly Peru and Costa Rica, is being considered for the near future.

## NICARAGUA

### Efforts To Combat Coffee Borer Described

91WE0517A Managua BARRICADA in Spanish  
19 Aug 91 p 2B

[Article by Pedro Vindell]

[Text] Granada—Approximately 3,000 manzanas planted with coffee in Region IV and representing 20 percent of the total cultivated area, consisting of 13,600 manzanas, have been stricken by the coffee borer. This report was made by engineer Luis Mejia, from the Ministry of Agriculture and Livestock [MAG].

Eng. Mejia remarked that an investigation of the coffee plantations in Meseta de Carazo and Cerro El Mom-bacho is being conducted. At the same time, the farm owners, administrators, and workers involved in coffee cultivation work are being given an explanation of the procedures for controlling the borer, as well as for cleaning, pruning, ventilating, and regulating the shade on the coffee plantations.

The MAG is also recommending chemical control in the use of insecticides, and has suggested the product known as Endasulfen, with one or two liters sprayed on each manzana to combat the borer. It is also advised that a good collection of the bean be made during the harvest season.

Eng. Mejia noted that about 600 persons directly associated with coffee production, including ministry employees, technicians from the National Development Bank [BND], and producers, will participate, starting this month, in 24 intensive training workshops relating to the national campaign against the coffee borer.

He admitted that, if the regulations issued by the MAG and the National Coffee Commission are not observed, those 3,000 manzanas affected could be a factor spreading the damage. He added that the greatest problem confronting them is on the Meseta de Carazo coffee plantations.

He commented that, if timely action is taken, the coffee borer may not advance; adding that they have support for the campaign from the UNAG [National Union of Farmers and Cattlemen], the BND, and the National Producers Association.

Despite the 3,000 manzanas of coffee infested by the insect, he claimed that the target for the region is to produce 130,000 quintales of the golden bean.

## PANAMA

### Health Minister Reports Cholera Related Deaths

PA1909171991 Panama City EL DIARIO  
INDEPENDIENTE in Spanish 18 Sep 91 p 23

[Report by Lionel Blaisdell and Josefa Cedenó]

[Text] On 17 September, Health Minister Guillermo Rolla Pimentel reported that three persons have died of cholera in Panama. He described the epidemic, which is affecting approximately 76 people in the Province of Darien, as severe.

It was reported that 250 Indians could be affected by this terrible disease, which is threatening to spread to the capital, a government spokesperson stated.

The rivers of the region of Tuira and Chucunaque have reportedly been contaminated with the bacteria. So far, Rigoberto Lore, 56, and Anuipé Heyra, 55, have reportedly died of cholera and a third person died on 16 September.

The health minister denied the reports that cholera is threatening to spread to the capital, but he insisted on the implementation of measures of hygiene to prevent the deadly epidemic from spreading.

Health Minister Guillermo Rolla Pimentel reported that out of 74 persons infected with cholera, seven remain at the hospital in El Real.

In less than 24 hours, 26 cases were found in the region of Pinogana, which is located near the River Tuira Chico.

Rolla Pimentel made an urgent appeal to the street food vendors to present themselves before the General Directorate of Health to receive instructions on the handling of food and the spread of the virus.

According to Dr. Guillermo Rolla Pimentel, approximately 50,000 Panamanians could become infected with cholera.



**Councilmen Request Allotment**

Meanwhile, the corregimiento representatives on 17 September discussed a project to request an additional allotment of \$500 to face the cholera epidemic, which "is about to get to the capital."

This proposal, presented by representative Vidal Garcia, was strongly opposed by his colleagues Astrid de Vasquez, Eduardo Camacho, and Nelly de Figueroa.

**PERU****Malaria Kills Four in Piura**

*PY1309232091 Lima LA REPUBLICA in Spanish  
4 Sep 91 p 16*

[Summary] A total of four people have died of malaria in Piura in the past few days. About 150 people are infected with the disease that was apparently transmitted by people from areas on the Ecuadoran border. This is the first time this type of malaria has affected this Peruvian zone.

**Official Says Cholera Epidemic Under Control**

*PY1909123291 Madrid EFE in Spanish 0158 GMT  
19 Sep 91*

[Text] Lima, 18 Sep (Andina)—Health Vice Minister German Guerrero de los Rios today stated that the cholera epidemic is under control. He noted, however, that there may be an increase of the disease in various localities if essential sanitation measures are not taken.

Guerrero said that medicine and medical teams are being sent to Iquitos and Chimbote, where the disease has increased, to implement a prevention campaign.

He noted that \$5 million is required to improve the existing sanitary infrastructure facilities.

Julio Castro Gomez, chairman of the Chamber of Deputies Health Committee, said the committee is considering requesting that the executive branch allocate an additional \$5 million in this year's budget to bring the cholera increase under control. Guerrero testified today before the committee.

**Lima Declaration Signed on Environment, Sanitation**

*PY1010203691 Madrid EFE in Spanish 2353 GMT  
5 Oct 91*

[Excerpts] Lima, 5 Oct (ANDINA)—President Alberto Fujimori's administration and Peru's civilian society today expressed their solid commitment to strengthen the basic sanitary programs and environmental protection in keeping with the international agreements reached at the end of the century, and which includes the decision to fight the cholera epidemic in the Americas.

The document, known as the Lima Declaration, stresses that approximately \$3 billion is needed to invest in sanitation and potable water systems in Peru during the current decade. This represents an yearly investment 10.6 times higher than that made during the last decade.

The document states that basic sanitation programs should be jointly implemented with actions to prevent damage to the environment as a result of the development and prevent health risks for current and future generations.

The government and civilian society will implement joint solidarity projects designed to carry out rational control of natural resources, especially the air, water, soil, and subsoil, in order to assure the well-being and quality of life for current and future generations.

They also will promote studies on epidemiology, toxicology, and on the environment and health impacts that can lead to the search for financing and implementation of projects that can minimize the health risks caused by development. [passage omitted]

The Lima Declaration was signed by Health Minister Victor Yamamoto, Housing and Construction Minister Guillermo del Solar Rojas, and representatives of several social assistance and health organizations.

**URUQUAY****Concern Over Measles Epidemic**

*PY1010022091 Madrid EFE in Spanish 2314 GMT  
28 Sep 91*

[Summary] Montevideo, 28 Sep (EFE)—Uruguayan health authorities have voiced their concern over the measles epidemic that started three months ago in Salto. According to official reports, 944 cases of measles have been reported throughout the country so far.

## BANGLADESH

### Editorial Deplores Rise in Tuberculosis

91WE0555 Dahak *THE BANGLADESH OBSERVER*  
in English 15 Aug 91 p 5

[Text] A report from our correspondent at Nilphamari (Observer 10 August) put the number of TB patients at 4,000 in the upazila. The report further says that the number is on the increase. There is a yearly toll of deaths from tuberculosis in the country not reported in the press.

One main reason for the increased incidence of this wasting disease and the increasing mortality rate from it is the inadequacy of hospital care—particularly at the rural or upazila level. In the quoted Nilphamari case a TB ward, established in 1980 in a room in a local Leprosy Hospital, caters for TB patients and the care bestowed on them at the outdoor is marginal. As an appendix to the Leprosy Hospital it could never be better.

Overall, for treatment of TB patients the country has 12 TB hospitals with 553 beds and an indoor number of patients, 2,610. There are 44 TB clinics with an outdoor patient enrolment of 437,437. As a pulmonary disease having to do with the objective cause of malnutrition, TB is a poor man's disease. The rich with no problems of nutrition can also be susceptible to it because of subjective factors like overindulgence in certain habits including smoking. And its incidence globally is mostly a problem of poor Third World countries.

Considering the problem of increasing malnutrition in an eleven crore- strong population and the increasing shortage of general health care, the rising poverty line and lack of specialised hospital facilities, the immediate need is to provide both indoor and outdoor arrangements for treatment of TB patients and an elaborate arrangement under the Health Ministry for ascertaining the exact number of suffering patients and susceptibles in the country. In recent times TB as one of the killing diseases has been brought under control by the efficacy of drugs available for this purpose. Needless to say this has been rightly claimed as one of the significant successes of modern medicine. But this medical advantage in fighting off TB is yet not within reach of the swelling population of the poor Third World countries as extensively as it should be. The affected people in Bangladesh constitute 2.3 percent of the total population by a rough estimate.

Since the disease is more widely spread in the rural sector of the country, medical facilities both preventive and curative, have to be provided on a much larger scale under the new health policy of the public health authorities. TB, though, is a disease that is very vitally linked to the economic problem of mass poverty and malnutrition. The answer therefore to the spread of the disease fundamentally lies as much in increased medical and clinical facilities as in improving the standard of living of

increasing number of people. That is basically a national economic issue, part of the overall question of economic development for the nation.

For an LDC like Bangladesh the question can be whittled down to the simple fact that from the point of nutrition the problem is one of one section of the population having enough to eat and also perhaps waste and the other is so famished as to find it hard just to make both ends meet. Such a general situation involving more than 80 percent of the population is hardly to be tackled with anything even looking like success without an answer found to the fundamental problem of national poverty.

## INDIA

### Kala-azar Epidemic Spreads Fear in Bihar

91WE0552 Bombay *THE TIMES OF INDIA*  
in English 28 Aug 91 p 11

[Article by Aneeta Sharma: "Kala-azar Still Feared in Bihar"]

[Text] Patna, 27 August—Kala-azar which has taken an epidemic form has so far claimed about 5000 lives this year and has wiped out some families in Vaishali and Hajipur districts.

The people are reluctant to get their daughters married in these affected villages for fear of the disease. This was noted by a team of doctors led by Dr. C.P. Thakur who had visited the affected areas.

This deadly disease hits the poorer section of society living under extremely unhygienic conditions. The sandfly which is the chief carrier breeds prolifically in dirt filth and squalour. Jhuggi jhopri colonies, mushrooming khatahs and total absence of civil amenities have all combined to spread this deadly disease in the city.

Large number of Kala-azar cases had been pouring in at the clinics of the private doctors from Patna city, Mandiri, Digha, Punai-chak, Begumpur, Sabalpur and villages of the Jalla areas. There were 10 cases reported in the small primary health centre of Sabalpur area. The Tripolia hospital also has 10 cases.

The Dr. Thakur committee which had recommended and prepared an action plan of Rs 80 crore to combat the disease had so far not been cleared by the Centre. The committee had asked the Centre to fund this programme fully. At the moment, the share of the state and Centre is 50:50.

Against the total requirement of 3500 metric tonnes of DDT which was required to be sprayed in the infected areas and those mildly infected, the Central government agreed to give only 2000 MT of DDT. Of this 2000 MTs of the DDT, also it has given barely about 1200 MT.

The allocation for the disease has been very poor. This year the funds earmarked for kala-azar is Rs 10 crore of which Rs 5 crores comes from the state and remaining five from the Centre. Last year this amount was barely about Rs 5 crores to be shared on a 50:50 basis. At the moment the state government has stocks of 7000 vials of pentamidine. Sodium antimony group of medicine was also available.

Last year, the cases identified in government owned hospitals were 54,274 and deaths were 590 whereas till July this year, 27,104 cases had been reported besides 306 deaths. However, according to sources, more than one lakh cases were reported last year and the number had gone up to more than 2 lakhs this year.

When contacted Dr. C.P. Thakur said that the situation was worse than in 1977 when 4500 deaths were reported due to this disease. He said that he had submitted a project report about getting clearance of manufacturing of amphotericin, B-lipid complex, a strong medicine which had been tried in some cases at Darbhanga, and would directly hit the parasite. The authorities could also try making pentamidine available at the import price which would be just half of Rs 600-700 per vial and would also be easily available, he said.

The health secretary, Mr. S.R. Adige said that they had asked the Central government to fully fund the project and accept the Thakur committee's report. The state government had also decided to set-up a 60-bed specialised Kala-azar hospital in the Patna city hospital. A mass awareness programme through media, TV, pamphlets, documentaries, feature films, booklets and songs had been launched. Two special hospitals will also be set up at Benepatti of Madhubani and Kalyanpur of Samastipur districts.

### **Black Fever Kills 10,000 in Eastern India**

*BK1909014091 Hong Kong AFP in English 0133 GMT  
19 Sep 91*

[Text] New Delhi, Sept 19 (AFP) - A virulent disease sweeping eastern India has killed at least 10,000 people this year and is now threatening to engulf an entire province and spill into neighbouring Nepal, according to reports here.

Leishmaniasis, or Black Fever, has spread across 38 of northern Bihar state's 46 districts, triggering fears that it could contaminate other states where its deadly parasite was exterminated a decade ago and cause India's worst-ever epidemic.

The Bihar administration has voiced fears that by 1993 up to half a million people could die of the fever, while 40 million would be exposed to the disease and 10 million infected.

Kala Azar, as the disease is called here, is spread by sand flies. The illness starts with a high fever, enlargement of the liver and anaemia and leads to death after several months if not treated.

"Our records show that only 306 people have died from Kala Azar," Bihar Health Minister Sudha Srivastava said Wednesday by telephone from the state capital Patna, but added, "If we do not take steps then half a million will die. What can I do?"

She said 27,104 people suffering from the fever were currently being treated in state hospitals, but admitted that they were not equipped to take care of more than 20 percent of the stricken population.

"We will order a survey to find out how many have died and how many are sick," the minister told AFP a day after Patna urged New Delhi to declare Black Fever a national disease amid reports that it was spilling into the adjoining states of West Bengal and Uttar Pradesh, as well as into Nepal.

In contrast to the health minister's conservative estimate, World Health Organisation (WHO) Bihar representative C.P. Thakur placed Kala Azar's death toll for the first seven months of this year at 10,000 and said that thousands were suffering because of medical shortages.

The WHO expert said the disease was threatening people in western parts of Uttar Pradesh and had spilled into Nepal because of lack of preventive measures by their respective administrations.

Kala Azar has also appeared in West Bengal, but the local administration managed to control the disease and prevent it from turning into an epidemic, other reports said.

"We can add a couple of thousands to that 10,000 Bihar toll," said India's leading Black Fever expert, Sandeep Sen, who in a recent random survey of 263 residents of Bihar's worst hit northern Darbhanga district found that 225 of them were carriers of the potentially fatal protozoal parasite.

In a recent study, the London School of Tropical Diseases also found that about 150,000 people in Bihar's crowded north were affected by Kala Azar, Sen said.

"Doctors are not alarmists, the disease is alarming," Sen said, referring to allegations by Bihar Chief Minister Laloo Prasad Yadav that physicians were creating panic to earn more money in the fever-stricken zone.

Newstrack, a private video unit, put out the earliest reports that Kala Azar had virtually engulfed all of northern Bihar, one of India's most backward and lawless states.

The company's anchorman, Manoj Raghuvanshi, told AFP that the "Bihar situation was shocking."

Newstrack interviewed concerned state officials and politicians, who went on film confessing that the administration was partly responsible for the epidemic and saying that medical shortages were forcing people to sell property for treatment.

Imported drugs intended for free distribution are sold on the Bihar black market for anything from 19 to 57 dollars for three shots, forcing many to sell their homes and their land to afford the vital 25 doses, Newstrack said.

"Hospital doctors and nurses are selling Pentamidine on the black market and as a result people are buying (only) a couple of doses," said Raghuvanshi, adding that this caused patients to develop a resistance to the drug.

"A full course of Kala Azar treatment should not cost more than 1,000 rupees (40 dollars), but because of the rampant corruption it now costs about 12,000 rupees (460 dollars)," or more than the income that most Bihar people could dream of making in a whole year, a spokesman for the state's medical association said.

Bihar's health minister denied there was a shortage of the vital life-saver and said New Delhi has sent 28,000 vials of Pentamidine, a toxic drug which destroys the parasite if administered intravenously twice daily for a fortnight.

"We have already distributed 19,079 vials," she said, but admitted that the medicines were sent mainly to government hospitals and not to private practitioners battling the disease in stricken villages.

The Bihar government, administered by the opposition Janata Dal (People's Party), has blamed New Delhi for failing to send sufficient pesticides to kill the sandflies carrying the disease.

"We needed 800 tonnes, but have so far received only 400," Srivastava said.

He admitted, however, that the full consignment was still tied up in the state capital's rail terminal.

### **Sickle Cell Disease Among Orissa Tribals**

91WE0521 *Calcutta THE TELEGRAPH in English*  
5 Aug 91 p 5

[Text] Phulbani, 4 August—Many Harijans and tribals of Phulbani district in Orissa are suffering from the dreaded sickle cell disease (severe hereditary anaemia).

Six of the 25 tribals admitted in the district headquarters hospital here died of this genetic ailment this year. In 1990, 22 patients were admitted but none of them died.

Many villagers are also dying in subdivisional hospitals and primary health centres. The Baliguda subdivisional hospital reported two deaths this year. Hospital authorities said there might be more deaths but the figure was mixed up in the cases registered under categories of related diseases.

Doctors at Phulbani and Baliguda and at the Phiringia primary health centre admitted that many more were dying of the disease but the number would not be recorded as patients were not coming to hospitals. Belief in quack doctors, lack of communication and poverty were the main reasons for all patients not reporting to hospitals.

Dr. Prab Hakar Kar, additional district medical officer (public health) and Dr. Bhagaban Mohaty, the medical officer at the district hospital, said about 1 percent of the district's population, working out to 50,000, was suffering from the disease. Of the three sub-division, the disease is prevalent in hilly Phulbani and Baliguda.

According to Dr. Kar, Harijans are mostly affected. Of the four patients admitted in the district hospital of 30 July, Sukumari Digaal (16), Srimanta Kumar Mahananda (20), Ranjit Behera (eight) and Binod Bihari Pradhan (20), the first three were Harijans. Srimanta's 14-year-old brother died of the disease three years ago.

The Baliguda subdivisional health authorities, who recently conducted a survey of the incidence of the sickle cell disease, found as many as 57 positive cases out of 332 persons examined.

The government has yet to undertake a comprehensive survey of the spread of the disease which is also prevalent in Sambalpur, Bolangir and Sundargarh districts. The proposed institute for prevention and cure of the disease at Burla in Sambalpur district has not yet been built.

The disease, which is hereditary, can be considerably controlled by preventing marriages between men and women, affected by it. A person attacked by the disease has most of his red blood cells sickle-shaped and dead, as a result of which the blood circulation slows down leading to death if not treated immediately.

### **Gastroenteritis Throughout Andhra Pradesh**

91WE0520 *Calcutta THE TELEGRAPH in English*  
20 Jul 91 p 7

[Text] Hyderabad, 19 July—Nearly 720 persons have died of gastroenteritis in Andhra Pradesh during the past month. The water-borne disease has become a perennial feature in the state.

According to the state health ministry, the attack of gastroenteritis in the state had claimed 965 lives in 1987, and nearly 700 last year.

The killer disease struck in Mahboobnagar, Nalgonda, Anantapur, Rangareddy districts there is a dearth of clean drinking water supply in villages. All the 23 districts in the state have been affected by gastroenteritis, but Hyderabad and Secunderabad alone registered nearly 11,000 cases.

The threat of gastroenteritis has affected the biriyani trade in the old city. The Hyderabad delicacy is being

avoided by most tourists following reports that biriyani was spreading the disease. Many city bars have been advised not to serve ice.

The state government has taken up a massive programme of chlorination of standing rain water in all tanks and wells in the affected districts. In the capital, people have been advised to drink boiled water. The state directorate of medicare has also opened an "epidemic cell" in the capital to coordinate the relief measures.

### Gastroenteritis, Cholera in Himachal Pradesh

91WE0554 Bombay THE TIMES OF INDIA  
in English 6 Aug 91 p 11

[Article by Savitri Choudhury: "Epidemic Causes Panic in Himachal"]

[Text] Mandi, 5 August—Panic spread through the hills as quickly as the epidemic. A bout of vomiting, an upset stomach and then collapse and death within a span of four to five hours. Gastroenteritis and hill diarrhoea are a common feature in Himachal Pradesh during the monsoons; but this year, for the first time since 1934, the state has been in the grip of a cholera and gastroenteritis epidemic.

And never before have the casualties been so high. The official death toll, since 11 June, is over 130 and increasing every day. The unofficial figure is well above 250. The magnitude of the crisis is evident: in Mandi district, which has a population of 8 lakhs, nearly 18,000 people have been treated for gastroenteritis, cholera and other related diseases in various hospitals and camps in less than two months, while another 6,000 were hospitalised. This number excludes those who visited private practitioners.

The first record of the epidemic was at a marriage in a remote village in Mandi district on 11 June, where a number of people fell ill. Over the next few days, it spread to the neighbouring districts of Hamirpur, Kangra, Bilaspur, Shimla, and Kulu. Deaths have also been reported from Sirmur in the south-eastern corner of the state. Generally, inaccessible villages have been afflicted.

The only silver lining behind the epidemic cloud is that officials believe that the worst is over. Says Dr. L.R. Sharma, chief of the Sarkaghat hospital (more than 70 people have died in this area), "At the height of the epidemic our 50-bed hospital was catering to 211 patients. Now we mercifully only have 25 patients." However, Dr. Sharma and his team are still on red alert, though most people believed that the crisis had blown over by 26 June, it actually reached critical dimensions after 11 July.

The outbreak of cholera was announced more than a month after the first deaths were reported on 11 June. The first batch of cultures was examined on 18 June by experts of Indira Gandhi medical college, Shimla, who did not detect any cholera germs. A month later, when

the epidemic failed to subside, the government called in experts from the National Institute of Communicable Diseases (NICD) who reported cholera positive.

Doctors say vomiting and diarrhoea are common to both gastroenteritis and cholera. Most experts were therefore under the mistaken notion that it was only a gastroenteritis epidemic. "However, a week before the NICD report we began suspecting cholera and started treating our patients for both," said Dr. Sharma. "This helped save a number of lives."

Dr. B.S. Soni, an ayurvedic doctor in Sarkaghat who was treating as many as 50 patients a day at the height of the epidemic, contests the assumption that it initially began as a gastroenteritis epidemic. "From the very start patients were showing symptoms of cholera, which later degenerated into severe gastroenteritis," he maintains.

Public criticism is directed at the state irrigation and public health department (IPH), which is responsible for chlorinating all piped and irrigation water sources. Despite the massive "Operation Chlorination" drive launched by the government on 17 June, water samples drawn during the second week of July in Mandi, (at the height of the epidemic) exposed the IPH, as the chlorine level was below the prescribed level. The government suspended three junior engineers and directed all district commissioners to personally check that all water sources, piped and natural, in their districts were properly chlorinated. This is not easy, as some districts may have as many as 2,000 natural water sources.

The low rainfall in Himachal this year is one of the causes of the epidemic. Because, of the water shortage, villagers turned to natural sources, which were often infected. Second, heavy rainfall usually washes the slopes clean but the light drizzle this year has allowed dirt and excreta to seep into the water sources. Ignorance of hygiene measures, and the villagers' dependence on quacks has further complicated the problem.

The state government is now under tremendous pressure to have the epidemic under control before 11 August, after which the state will be host to the Chittipurni and Nainadevi fairs. Over one lakh pilgrims are expected to come up from the plains to attend these. Strangely, however, the government has not informed tourists in the state of the existence of the epidemic.

The task of controlling the epidemic has become difficult as it is not confined to one area. Mandi was the worst hit, but there have been sporadic outbreaks in other districts too, including Shimla which has reported four cholera deaths. Medical experts have warned that cholera, having made its appearance in the state, is bound to keep cropping up over the next couple of years. The NICD's report mentions that this particular strain of cholera has the characteristic of remaining dormant for a long period of time.

Had the administration left it to the medical department alone, the casualty rate would have been much higher. Thanks to the timely intervention of the district authorities in Mandi, the death rate has been restricted to 2.5 percent, of those affected, whereas in a cholera epidemic the death rate can be as high as 40 percent. District officials directly procured medicines instead of waiting for the health directorate to provide them. Control rooms, a wireless network and improvised ambulances had been organised. So far over Rs 40 lakhs had been spent by the district authorities in fighting the epidemic.

In other districts too, the commissioners have been advised to personally oversee all efforts to check the epidemic, according to Mr. A.N. Vidyarthi, secretary (health).

The epidemic, predictably, has become a major political issue, causing acute embarrassment to the Shanta Kumar-led BJP government. The opposition is having a field day and the local papers are full of allegations of government inefficiency. This has helped publicise the problem and ensure accountability, but district officials are cut up with the distraction of having to provide the government with daily briefs and answer "irrelevant" questions. Incorrect reporting in the local papers and opposition-sponsored demonstrations have only added to the panic, said a district official.

#### **WHO Official Interviewed on Antileprosy Fight**

91WE0522 Madras *THE HINDU* in English  
6 Aug 91 p 3

[Text] Madras, 5 August—The World Health Organisation (WHO) is committed to reducing the prevalence of leprosy to less than one case per 10,000 population by the year 2000. A decision to this effect was taken at a meeting of the World Health Assembly recently.

Following this, the WHO is developing strategies at the global, regional and national levels to achieve this goal.

The Director-General of the WHO, Dr. Hiroshi Nakajima, has constituted a special working group for leprosy control which met in July and discussed the various issues involved and the measures to be adopted.

'It is clear that if the goal of eliminating leprosy, that is reducing the prevalence to one case per 10,000 population is to be reached, our activities and resources have to be stepped up in the next five years,' said Dr. S.K. Noordeen, chief of the Leprosy Division of the WHO.

**Multi-drug therapy:** In an interview here, Dr. Noordeen said "The reason why we feel optimistic is that it has been possible to reduce leprosy by nearly one-third in the last five years. And countries which have implemented the multi-drug therapy (MDT) have been able to reduce leprosy by as much as 80 percent in the last five to seven years. This outstanding success of the MDT is definitely something to be happy about.

Reduction in cases has also been observed in parts of India where district programmes for MDT have been in operation for a long time. The main issue in India is the size of the problem and the need to involve the general health services in leprosy control. The logistics of supply of drugs has also to be ensured. "If the rate of progress in India is the same as what has been going on for some-time, the reduction in leprosy cases is going to be phenomenal," said the Chief of the Leprosy Division.

A major factor noticed in India and other Asian countries is the very strong political contribution and considerable amount of external resources used in the programme. The national resources for the programme have also been greatly augmented.

"The message is clear—today leprosy is a curable and conquerable disease. There is no need for social ostracism and it is already crumbling in most countries," said Dr. Noordeen.

On a global level, the issue of tackling the disease faced problems in African countries mainly because of resources crunch. The competing needs of other sectors, especially major public health problems like AIDS, necessitated reduction in the allocation for leprosy control. But the people are convinced that investing on leprosy control now means spending only for a particular period after which the resources can be used elsewhere.

#### **Four million cases**

On the number of cases worldwide, the WHO specialist said there were about four million registered cases. The real number of cases is expected to be less than twice this figure.

According to him, another important aspect of the disease is that the types of cases now are less severe when compared to what was noticed two to three decades back. "This means the disease now is a lot easier to handle."

While India tops the list of countries where leprosy is a serious problem, in Myanmar (Burma), Nigeria and Brazil also the problem is acute needing a great effort. There are at least 93 countries in Asia, Africa and Latin America where leprosy is a significant problem which needs to be contained.

On the problem in India, he said that there were around 2.4 million registered cases. "Tamil Nadu used to top the list in India and now it has gone down the list. Bihar is now topping the list. By 1992 end, all the endemic districts in the country will be covered by the MDT," he added.

Globally, external aid for leprosy control comes from bilateral arrangements and through voluntary organisations. The extent of aid at present is anywhere around \$150 million and the WHO hopes that more such aid will be available for the member countries to tackle the problem.

On the rehabilitation aspect, the WHO feels that prevention of deformities should be part of the control programme. Also, the approach to the rehabilitation component should be community based and part of any other similar programme as a separate one would be expensive. "But one should accept that rehabilitation measures are not easy to implement."

#### Field trials

He pointed out that MDT today was very effective but even better treatment was being tried out in different places. Field trials of new drugs were more potent than the ones currently under use in some places like Myanmar and Brazil. These drugs would greatly reduce the treatment period.

Dr. Noordeen suggested that leprosy control be made part of the general health care system, as, in future when the leprosy cases got reduced it would not be possible to sustain the specialised services for leprosy. For this, the general health care system should be reinforced so that any health worker was reasonably competent to handle the problem. It could be referred to specialists only when the need arose. "Although for the moment it is not possible, we would like to encourage leprosy diagnosis and treatment by the general health workers," he said.

In countries like India, the specialised workers for the leprosy control programme have to be retrained over a period of time as the intensity of the problem decreased. They will then have to be used in other fields, says Dr. Noordeen.

#### First Cases of Canine Ehrlichiosis Noted

91WE0523 Madras *THE HINDU* in English  
10 Aug 91 p 3

[Text] Madras, 9 August—Several pet dogs in the city are affected by a crippling disease transmitted by ticks. The disease known as Canine Ehrlichiosis caused by a parasitic organism. *Ehrlichia canis*, is reported in the country only recently, and in the last year more than 240 dogs were treated at the Madras Veterinary College Hospital (MVCH) said Dr. V. Gnanaprakasam, Registrar of the Tamil Nadu Veterinary and Animal Sciences University.

The disease was recorded for the first time in the country in army dogs treated in Madras by the Department of Clinical Medicine and Therapeutics and MVCH, and since then its incidence had been on the rise, he said. Infected dogs show symptoms of acute fever, lack of appetite, weight loss, conjunctivitis and occasional vomiting, and the disease could be diagnosed by a blood smear or buffy coat smear examination, said Dr. S. Prathaban and Dr. P. Dhanapalan of the Department of Clinical Medicine.

The disease manifests itself after an incubation of 10 to 15 days, and in some cases the affected animals do not show symptoms at all for weeks. In another form known as the terminal phase, the intensity of the disease varies

with the breed, they said. Human beings can also contract the disease through tick bite, and the typical symptoms include fever, muscular pain, headache and chills according to them.

Tetracycline therapy can effectively check the disease when administered early and prolonged treatment is usually necessary for animals with severe chronic infection. By preventing tick infestation, the occurrence of the disease could be minimised. Monthly blood tests will be useful in detecting the sub-clinical stage of the disease, according to the veterinary doctors. Protective measures such as wearing gloves and socks while handling pet dogs would reduce the chances of tick bite and occurrence of the disease in human beings, they pointed out.

### IRAQ

#### Over 600 Children Die of Malnutrition, Shortage of Medicine

JN1409103791 Baghdad *INA* in Arabic 0715 GMT  
14 Sep 91

[Text] Baghdad, 14 Sep (INA)—The director general of al-Qadisiyah Governorate's Health Department has said that 617 male and female children died in the governorate due to the continuation of the economic blockade and the shortage of medicines and antibiotics.

The newspaper AL-'IRAQ, published here today, quoted Dr. Sabah Hasan as saying that most of the dead children are under five years old, and that they died of malnutrition and shortages of medicines that ran out in all hospitals and health centers throughout al-Qadisiyah Governorate, 180 km southwest Baghdad.

He noted that 33 health centers were damaged as a result of the American-Zionist aggression and by acts of treachery and treason. He said that these centers used to render free services to the citizens.

#### Economic Blockade Results in 4,305 Deaths in Diyala

JN1709193491 Baghdad *AL-'IRAQ* in Arabic  
16 Sep 91 p 2

[Article by AL-'IRAQ correspondent]

[Excerpt] As a result of the economic blockade imposed by the U.S.-Zionist-Atlantic alliance against our struggling country between August of last year and the end of July this year, 4,305 people in Diyala Governorate have died, while 7,045 others suffered contagious diseases due to malnutrition, severe shortage of children's milk and its distribution in quantities less than those required, and the shortage of vaccines, medicines, and medical supplies needed for surgical operations.

Dr. Subhi Khamis al-Juburi, Diyala Governorate health director general, has explained that 1,119 infants under five years old were among the dead; 670 of whom were

males. Deaths among those over five years old amounted to 3,186 due to various illnesses, among which were diarrhea, interitis, hepatitis, high blood pressure, chronic cardiac diseases, complications of diabetes, and kidney diseases. [passage omitted]

**More Than 170 Maysan Children Dead as  
Medicine Shortages Worsen**

*JN0310155791 Baghdad AL-THAWRAH in Arabic  
2 Oct 91 p 5*

[Report by Flayyih Widday Mijdhab and Husayn 'Umran from Maysan]

[Excerpts] Up to the end of July, more than 170 children under the age of five have died in the Maysan Governorate as a result of malnutrition and medicine shortages caused by the unfair blockade imposed on our dear country. The shortages of food and medicine have crippled hospital services and rendered hospitals unable to provide their normal services to patients and newborn children.

Dr. Salim Muhammad al-Sa'idi, director general of the Maysan Health Department, indicated to an AL-THAWRAH press team that the governorate's hospitals and health centers are suffering from a burdensome and

worrying shortage of all medicine in general, and also from a severe shortage of particular medicines and vaccines. Sometimes, certain medicines and vaccines cannot be made available, he noted.

Dr. al-Sa'idi added that many other deaths, which could equal the number of aforementioned deaths, have not been registered with the hospitals and health centers because of the situation in the governorate, and also due to geographic and cultural considerations. He went on to say that deaths among elderly people have also been reported because of the inability to combat several illnesses as a result of the shortage of required medicines, because of medicines that have expired, or because of stoppages and defects which have plagued some medical facilities due to the war and the chapter of treason and treachery, which has inflicted immense damage and rendered the medical staff unable to perform their duties. Besides, the time factor has delayed repair and overhaul of these facilities, he said. [passage omitted]

Dr. Salim al-Sa'idi informed AL-THAWRAH that the rehabilitation of 15 health institutions has been completed in the governorate's capital and districts. Work is underway to rehabilitate seven other centers in a diligent effort that goes beyond normal working hours. [passage omitted]



**Guidelines for the Epidemiological Control of Malaria in the USSR**

91WE0288B Moscow *MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI* in Russian No 6, Nov-Dec 90 pp 58-59

[Review by A. N. Alekseyev, in Moscow, of book "Guide for Epidemiological Control of Malaria in the USSR," Moscow, 1989, Part I, 264 pages, Part II, 135 pages]

UDC 616.936-036.2-07+614.44:616.936](035)[049.32)

[Text] The appearance of a guide on malaria in our country could not be more timely. That disease has long been eliminated as one that affects masses of people, but the growth of the resistance of the disease agents and vectors to the means of control that are being used, as well as intensive population migrations, keeps the problem on our agenda.

This guide is the first to attempt to examine the system of malaria-control measures from the standpoint of epidemiological control. The group of authors tried to cover every possible aspect of the problem—from the global situation to techniques for mapping malaria foci. The chief merit of the first part of the collection is that it provides clear answers to the question, What can be done? No less informative is the second part, which brings together the latest procedural instructions and recommendations for the analysis, prevention, and control of malaria and its vectors in our country on the basis of the possible ways malaria can enter the country from tropical countries.

The structure of the presentation is based on a complex of measures for the prevention and control of malaria, which is where the definition of epidemiological control as a "system...of measures" (p. 95), i.e., as action, apparently comes from. The reader may get the impression that it is action without evaluation or study, whereas with other authors it is a "system of study" (P. N. Burgasov), a "dynamic evaluation" (V. D. Belyakov), or a "study of dynamics" (B. L. Cherkasskiy). Only later, on p. 100, are the four functions of epidemiological control listed, from which it follows that epidemiological control includes elements of information, epidemiological diagnostics, evaluation of efficacy, etc.

Some of the guide's sections are rather verbose—such as the section titled "World Malaria Situation," which gives the reader no idea of what the predicted trends are for the development of the malaria process or of what the danger is from that process (is it growing, or diminishing?) in certain regions of the globe. But there are sections that are concise and sparkling with information, such as the section titled "Basic Information on the Molecular Biology of the Malarial Agent," where the most complex of concepts and procedures are presented and updated in easy-to-understand language. The clearly

presented data on the ecology and biology of the principal malaria vectors in the USSR are interrupted by V. N. Beklemishev's distorted exposition "Ecology of the Malarial Mosquito." As a result, one can read on p. 56 that "in the first few days of its life, the female (*Anopheles—Ed.*) is green," whereas Beklemishev says (on p. 128) that "the unextended stomach of the newborn female contains a greenish mass of meconium." The guide itself, on p. 73, says this about the female *An. pulcherrimus*: "The white color of its body and wings helps to reflect the sun's rays."

The section "Malarial Vector Resistance and Susceptibility to Irritation From Insecticides" tells how those phenomena are defined, but not a word is said on the significance of changes in vector irritability as such.

Those, alas, are not all the discrepancies. For example, on p. 79, five criteria are given for the malarial vulnerability of an area, three of which pertain to the role of the vectors. In the meantime, on p. 59, the epidemiological significance of the *Anopheles* mosquitoes as vectors is determined by five very important factors. One of them is completely ignored on p. 79 (factor 2, the length of time the sporozoites are in the salivary glands); and another—species population level (factor 3 on p. 59)—is not considered on p. 79, but on p. 84 one reads that population level can be insignificant for evaluating the malarial vulnerability of an area when man is highly accessible to the mosquito. V. N. Beklemishev's definitions of the centers and zones of attraction for the female *Anopheles* are presented in a completely incomprehensible manner. Figures 7 and 8 have identical titles (Part I), and Table 1 (Part II) has a title with no proper ending, and the reader may think that the signs of the agents are "in the small....," say, intestine, especially since the topic is humans at that point. Section 1.2, on p. 165, tells what the figure is for the population level of exophile mosquitoes, but, unlike as with the determination of that figure for endophile mosquitoes (p. 164), the method itself of estimating is not described. The reader finds out about that only in the section on observations of seasonal variation of activity. Despite those spots in which the presentation is careless, this reviewer dares to recommend that readers acquire the guide, and he advises that they use the data in Part I and adhere to the instructions and directions adopted and affirmed in Part II.

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**Suspected Typhoid Outbreak in Kazakhstan**

OW1409010391 Moscow *INTERFAX* in English  
1245 GMT 13 Sep 91

[Following item transmitted via KYODO]

[Text] In the Chimkent District of Kazakhstan 23 local State Farm workers were hospitalised between the end of August and September 11th with suspected typhoid. This diagnosis was confirmed in 11 cases on Thursday. The Chimkent District medical authorities have initiated anti-epidemic procedures.

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